Virtual Iron® Software Release Notes

Virtual Iron® Version 4.5

Copyright (c) 2009 Virtual Iron Software, Inc.

000010609R1

This information is the intellectual property of Virtual Iron Software, Inc. This content is for your personal use only, subject to Terms and Conditions. No redistribution allowed.

Contents

Extended Enterprise Edition Upgrade Instructions 3
Supported Operating Systems 3
New in Release 4.5 3
New in Release 4.4 4
Fixed in Release 4.5 4
Open Issues in this Release 6
Product Documentation 11
Contacting Virtual Iron Support 12

Extended Enterprise Edition Upgrade Instructions

If you are running an earlier version of Virtual Iron® EE or XEE, use these links and follow the instructions to upgrade to the current version of the product. Install the new VS Tools onto each of your Virtual Servers.

http://www.virtualiron.com/Support/Upgrade-Information/index.php

Supported Operating Systems

Virtual Iron® supports virtual servers running the following OSs and versions. RHEL 3 U8 and U9 32-bit

- RHEL 4 U4, U5, and U6 AS 32-bit and 64-bit
- RHEL 5 U1 32-bit and 64-bit
- SUSE Linux Enterprise Server 9 SP3 and SP4 32-bit and 64-bit
- SUSE Linux Enterprise Server 10 SP1 and SP2 32-bit and 64-bit
- CentOS 4 U4, U5, and U6 32-bit and 64-bit
- CentOS 5 U2 32-bit and 64-bit
- Windows 2000 SP4 32-bit
- Windows Server 2003 SP2 32-bit and 64-bit
- Windows Server 2008 32-bit and 64-bit
- Windows XP SP3 32-bit
- Windows Vista 32-bit and 64-bit

New in Release 4.5

Release 4.5 includes the following new functionality and enahancements:

- Windows 2008 is a supported management server platform
- Role based access control
- The location of the network ISO directory can now be changed
- Users can now change their own password
- Node local network switch, i.e. vswitch without any physical adapters
- Untagged VLAN support (VLAN ID = 1)
- A vnic's associated network can be changed while the virtual server is running
- Enhanced PXE boot support
- Scaling Improvements—up 500 raw luns per node
- Support Win2008 hyper-V enlightenments
- iSCSI LUN discover performance improvements
- A VS boot disk can now be larger than 137 GB.

NEW IN RELEASE 4.4

Release 4.4 includes the following new functionality and enahancements:

- LivePower™ dynamically stops and starts nodes based on processing demand across a VDC.
- Windows Network Load Balancing (NLB) is now supported across two NICs on a virtual server.
- You can now have multiple license files, and to add more licensed sockets, you need only purchase a new license file and copy it to the appropriate directory. The total number of socket licenses appears in Help > About.
- The Network tab now appears in the Resource Center. Formerly, it appeared in the Hardware tab.
- A new Language Keymap Setting feature is available via a right-click across an entire VDC or an individual virtual server.
- VNIC Manager in the Tools menu allows you to create as many VNICs as you need.
- File Manager in the Tools menu allows you to move files on and off the VI-Center.
- Auto-update of Windows VS Tools via a script available from the Windows VS.
- Improvements for dealing with power fail and virus issues
- Improved Storage Functionality: The following additional features are supported in this release:
  - More than one physical Ethernet connection (bonded interfaces) is now supported for the iSCSI network.
  - Support for 2 separate iSCSI networks
  - No need to reboot to see newly added iSCSI LUNs
  - Remove a disk drive from a SAN disk array without requiring attached nodes to be rebooted

FIXED IN RELEASE 4.5

Number	Fixed in This Release
2278 **3006** **5139**	**ADDING OR REMOVING LUNS COULD REQUIRE A NODE REBOOT** When adding or removing LUNs to the system to modify storage capacity, it is sometimes necessary to reboot the nodes to accurately display the LUN configuration. If a LUN is removed or offline and the VI-Center shows it as online, errors could result if a user attempts to perform operations on that LUN, such as creating virtual hard disks. First, LiveMigrate all virtual servers off the node, then reboot the node. You can then LiveMigrate servers back onto the node.

2884	**VS SHUTDOWN DOES NOT WORK IF YOU ARE NOT LOGGED INTO THE CONSOLE** For a Windows 2003 server, if the login popup is visible in the console window, you cannot shut down the virtual server via the management server.

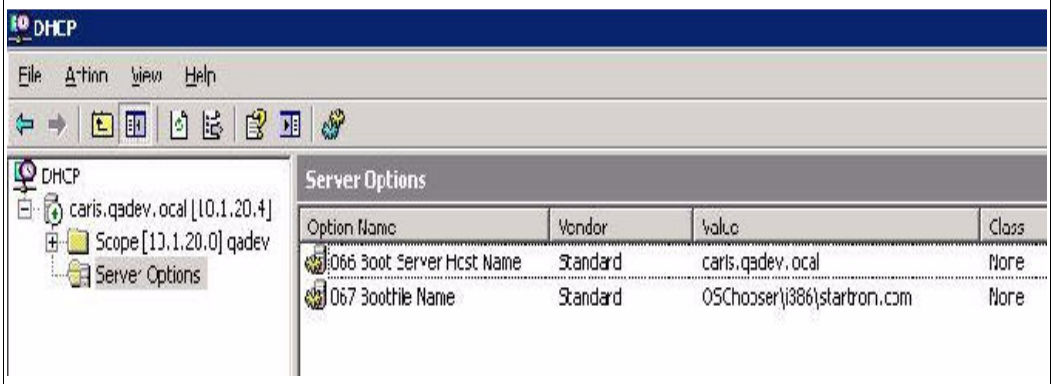
5739	**CAN NOT UPGRADE FROM SOURCE RPM TO RELEASE RPM**
	
	If you have installed Linux VS tools using the SRPM package, and plan to upgrade to an official Virtual Iron VS Tools release, you need to use the following steps to upgrade:
	
	1. Type
	`rpm -qa | grep virtualiron`
	to get the name of the package that is currently installed on your system.
	
	2. Remove the currently installed package using:
	`rpm -e virtualiron-x.x.x.x-x.x.x`
	where the x is your kernel version and Virtual Iron version.
	
	3. Download the package associated with your kernel version and type:
	`rpm -Uvh virtualiron-x.x.x.x-4.3.x`
	where the x is your kernel version and Virtual Iron version.
	
	4. Reboot your Virtual Server and the new tools should be active on the guest.

6526	**PROMPTED TO INSTALL OLDER NEXTNET DRIVER AFTER ADDING A VNIC TO A VIRTUAL SERVER** On Windows , adding a VNIC to an existing virtual server prompts you to install an older NextNet driver upon reboot. When the Confirm File Replace dialog appears, click No.

OPEN ISSUES IN THIS RELEASE

Following are known issues related to this release.

Reference Number	Open in This Release
172	**QLOGIC HBAS NOT REPORTING PERFORMANCE INFORMATION** Nodes with QLogic HBAs will not report disk performance data in the Virtual Server Performance chart.
537	**KEYBOARD INPUT INTO VIRTUAL CONSOLE OCCASIONALLY RESULTS IN REPEATED CHARACTERS** When you type into a virtual console that contains an X windows display, occasionally the keyboard output will be repeated. For example if you type **ls** into a terminal window in X, you may see llllssss output in the virtual console. The workaround is to disable the keyboard repeat function.
723	**POOR NETWORK PERFORMANCE ON 3COM NICS** Poor network performance has been observed on 3COM NICs. This may impact the performance of virtual server network operations.
1122	**AFTER A RED HAT INSTALL, THE VCONSOLE IS BLANK WHEN VIRTUAL SERVER BOOTS TO RUN LEVEL 5** The first time Red Hat boots after an OS installation, the virtual console may be blank when the system goes into run level 5. Workaround: Remove **rhgb** from the boot line in **/boot/grub/menu.lst**.
2028	**RH3-U8 CONSOLE KEYBOARD NOT WORKING WITH KUDZU** If RedHat 3 is installed while the virtual server is configured in the VI-Center with a USB mouse (for example, RHEL4 LINUX) instead of a PS2 mouse, you will be in Kudzu after you boot with a PS2 mouse configuration. Kudzu can not use the mouse or keyboard at that point and will time-out. The system will continue to boot. Workaround: Configure the virtual server properly in the VI-Center prior to installing. If the problem does occur, correct the VI-Center virtual server configuration. Then, boot the virtual server and manually invoke Kudzu from a console window. Remove the USB drive when you are prompted to do so.

Reference Number	Open in This Release
2761	**WIN2003 SP2 AND WINXP SP2 INSTALLS SLOWLY AND WINSP SP2 AND SP3 PERFORM SLUGGISHLY ON CERTAIN MULTI CPU MACHINES** On some dual-CPU machines Microsoft incorrectly identifies the second CPU in the Device Manager causing reduced performance. Both Win2003, service pack 2 and WinXP, service pack 2 and 3 guest operating systems install slowly. When installation is complete, check the Device Manager to see if the proper CPUs are identified. If not, update your Hardware Abstraction Layer (HAL) to the latest version.
3445	**VIRTUAL IRON AND MICROSOFT RIS** When using Windows RIS to install Windows into virtual servers, note that Windows 2000 RIS Server is unsupported; Windows 2000 does not provide RealTek NIC driver support. (Windows 2003 Server and RIS is supported.) Workaround: Configure the Windows DHCP server to use options 66 (boot server host name) and 67 (boot file name). Set DHCP option 67 to point to the location of your startrom.com. This causes the DHCP and PXE boot process to boot the RIS kernel. Refer to figure below.  For additional information, refer to: http://support.microsoft.com/kb/244036/
4317	**BONDED ETHERNET NICS SHOULD BE CONFIGURED TO SEPARATE SWITCHES** If you configure bonded Ethernet NICs to the same switch, you can experience up to 60 seconds of connection failure when a port fails. Outgoing data traffic experiences no issues. It is recommended to configure bonded Ethernet NICs to separate switches, creating a fully-redundant topology, and no incoming connection failure window.

Reference Number	Open in This Release
4333	**CLONING LOGICAL DISKS WITH SAN-BASED CONTROLLERS** If you can clone your storage array and you wish to use that cloning feature, you must use raw disks. The logical disks do not support storage array-based cloning or storage array-based snapshots. The reason for this is because, if physical disks that contain logical disks are cloned by a SAN-based storage controller, the resultant cloned logical disks will have identical IDs to the masters. This creates naming issues within the managed node. Logical disks should only be cloned via the VI-Center. Raw physical disks that do not contain logical disks can be cloned by SAN-based storage controllers without issue.
5694	**BONDING ISSUES WITH SOME ETHERNET CHIPS** Bonding is not supported on Ethernet chips that do not allow changing the MAC address while the chip is in the running state. In this case, the bonded network is rejected, and the "Operation not supported" error message is returned. This occurs on 3Com and some other older 10/100 Ethernet chips. Bonding is not supported on 3Com Ethernet chips (Marvell) that do not support interface carrier states. This causes bonding to keep the state as "up" when it should be "down", therefore never switching to the backup link. Broadcom and Intel chips are recommended.
6089	When running the VI-Center UI on Linux client systems with java version greater than 1.6.0.3, the Tools>File Manager file menus may not operate correctly. The workaround is to use a Windows client or to run an earlier version of Java.

Reference Number	Open in This Release

6403	As of Update 7, Red Hat Enterprise Linux version 4 now incorporates builtin drivers for certain aspects of Xen virtualization. Unfortunately, these are built into all their stock kernels, and not provided as modules. These drivers conflict with the Virtual Iron accelerated drivers. Before using the Virtual Iron drivers on this version of Linux it is currently necessary to first rebuild the kernel without the Red Hat drivers.
	
	Some familiarity with the kernel build process is assumed in the following directions. To rebuild the Red Hat kernel without Red Hat Xen drivers you must have installed the development tools on the guest, and you must install the kernel RPM. The kernel source RPM is installed with:
	
	`rpm -i kernel-2.6.9-78.EL.src.rpm`
	
	Now the kernel build area is created and the Red Hat patches applied with the following command:
	
	`rpmbuild -bp /usr/src/redhat/SPECS/kernel-2.6.spec`
	
	Next the kernel is configured:
	
	`cd /usr/src/redhat/build/kernel-2.6.9/linux-2.6.9`
	`make menuconfig`
	
	From the configuration menu scroll down and select:
	
	`Xen PV-ON-HVM Configuration`
	
	On the submenu enter "n" in the box for "XEN_PV_ON_HVM Support", then exit menuconfig. Rebuild the kernel and modules thusly:
	
	`make clean`
	`make all`
	`make modules_install`
	`make install`
	
	It will take some time for the "make all" to complete. After this you must boot the guest and wait for the LILO boot menu. Select the new kernel, which will show up with "-prep" in the name (alternatively you could have edited grub.conf and changed the "default" definition before rebooting). Now you can rebuild and install the Virtual Iron accelerated drivers (vstools) from its source rpm. Consult the documentation to see how this step is done.

6812	**GNU PARTED PRODUCES AN ERROR WITH VSTOOLS ENABLED** Using GNU Parted with VSTools enabled causes the following error to appear: `Error: Error initialising SCSI device /dev/sda - Invalid argument Ignore/Cancel?` Type **Ignore** and continue.

Reference Number	Open in This Release
7019	**GOS DOES NOT START WITH LVM ON SOFT RAID1** Currently it is not possible to use vstools on a RHEL5 guest installed with a root volume that uses both LVM and RAID. Either LVM or RAID alone is fine.
7226	**RESTORE DOES NOT WORK ON A GERMAN LANGUAGE MACHINE WITHOUT MODIFYING THE RESTORE.BAT FILE** The workaround for this issue is to open the Restore.bat file in a text editor and change the Y in the following line: takeown /F . /A /R /D **Y** > NUL to a J: takeown /F . /A /R /D **J** > NUL
7229	**VI-CENTER NOT DETECTING LUN RESIZES ON A SAN** The workaround for this issue: 1. Stop all Virtual Servers using the resized disk. 2. In VI-Center, go to every Node that has a path to this disk and: a. Select the Node and the Physical Storage tab. b. Right-click on Disk and select Remove. c. Right-click on each Node and select Rescan-SAN-Ports. After removing all the paths and rescanning on all the nodes, the Disk should show the correct size. Note: if you remove only one of many paths to the Disk, the Disk size is set correctly after the first rescan. However, if you every rescan on one of the nodes that you didn't remove the path from, the Disk size will be reset back to the old value. Better to be safe and remove them all.

Reference Number	Open in This Release
7310	**SPECIAL INSTRUCTIONS FOR UPGRADING FROM V4.3 TO V4.5** We strongly recommend you update your VSTools after upgrading to v4.5. Windows 2008, Windows Vista, and Suse Linux users must upgrade their tools due to changes that were made to improve the accuracy of virtual server time-keeping. **Windows Vista and 2008 VSTools**: During the upgrade to V4.5 all Virtual Servers that are running Windows Vista or Windows 2008 will be changed to Operating System “Other Windows”. Once you have completed the v4.5 upgrade: 1. Upgrade to the V4.5 VSTools in these virtual servers. 2. After the VSTools on the guest are updated to V4.5, change the operating system back to Windows 2008 or Windows Vista, as appropriate, in VI-Center. This will require that the guest is shut down, but it can be done during a maintenance window. **Novell Suse Linux**: Once you have completed the v4.5 upgrade, upgrade to the V4.5 VSTools in these virtual servers. If you shutdown the virtual server without upgrading VSTools, change the virtual server type in VI-Center from its current setting to "Linux Recovery", boot the virtual server and upgrade VSTools. After successfully upgrading VSTools, shutdown the guest and set the virtual server type in VI-Center back to its original setting.
NONE	**USING 64GB OR MORE PHYSICAL RAM IN A NODE** If you would like to use a node that contains 64GB or more physical RAM, please call technical support for configuration information.
NONE	**SAN MULTIPATH SUPPORT** SAN multipath for fibre channel-based SAN has been tested on limited configurations in Virtual Iron. Please see the Virtual Iron HCL for complete multipath support information: http://www.virtualiron.com/Support/Compatibility-and-Requirements/index.php
NONE	When you have large number of LUNs (>100) connected to your nodes, this may cause the archiver to run too often. This is due the large number of events generated by these LUNs and the archiver limit is set too low to handle that number of events. You can increase the archiver limit by pulling down the Tools menu at the top of the UI, and selecting Archive Manager... The default limit for the Archiver is 5,000 non-job events. This should be increased using this formula: #_of_nodes * #_of_iSCSI_LUNs * 10 For example, if you have 5 nodes and 500 iSCSI LUNs, the non-job events limit should be set to 25,000. This will be handled dynamically in a future release.

PRODUCT DOCUMENTATION

The following documents are also available online:

- *VI-Center™ Administrator Guide* - Explains how to configure and manage virtual data centers and virtual servers.
- *VI-Center™ Getting Started Guide* - Guides you through the process of getting a virtual server up and running
- *Virtual Iron Tutorial* - Guides you through installation, and storage, boot, and memory configuration options of a virtual server.

CONTACTING VIRTUAL IRON SUPPORT

Use this information to reach Virtual Iron® customer support.

Phone: 1-800-314-9872 (Select option 2)

Mail: support@virtualiron.com

Web: www.virtualiron.com/Support/Customer-Login/index.php